AUTHOR INDEX

A

Abergel D — *See* Stoven V *et al*, 531
Adolph HW — *See* Corbier C *et al*, 545
Afshar M — *See* Sri Widada J *et al*, 19
Akiyama M — *See* Kanda T *et al*, 355
Alfsen A — *See* Huang XH *et al*, 41
Altman S — *See* Knap AK *et al*, 779
Alzari PM — *See* Tello D *et al*, 507
Amontov SV — *See* Rabinkov AG *et al*, 719
Apirion D — *See* Srivastava RK *et al*, 791
Arnoux B, Ducruix A, Astier C, Picaud M, Roth M, Reiss-Husson F, Towards the understanding of the function of *Rhodobacter sphaeroides* Y wild type reaction center: gene cloning, protein and detergent structures in the three-dimensional crystals, 525
Asselin J — *See* Sri Widada J *et al*, 19
Astier C — *See* Arnoux B *et al*, 525
Atabekov JC — *See* Morozov SY *et al*, 677

B

Bahri SM, Ward M, Regulation of a thermostable α-amylase of *Streptomyces thermoviolaceus* CUB74: maltotriose is the smallest inducer, 893
Bailly A, Lone YC, Latruffe N, Variations of specific mRNA and polypeptide contents of rat liver D-β-hydroxybutyrate dehydrogenase during an experimental diabetes mellitus, 351
Ballery N — *See* Yon JM *et al*, 417
Bally M — *See* Lazdunski A *et al*, 147
Baty D, Pattus F, Parker M, Benedetti H, Frenette M, Bourdineaud JP, Cavard D, Knibiehler M, Lazdunski C, Uptake across the cell envelope and insertion into the inner membrane of ion channel-forming colicins in *Escherichia coli*, 123
Baudin F — *See* Romby P *et al*, 437
Bedouelle H, Recognition of $tRNA^{Tyr}$ by tyrosyl-tRNA synthetase, 589
Befort N — *See* Meyer D *et al*, 57 — *See* Orfanoudakis G *et al*, 271
Benbadis L, Faelen M, Slos P, Fazel A, Mercenier A, Characterization and comparison of virulent bacteriophages of *Streptococcus thermophilus* isolated from yogurt, 855
Benedetti H — *See* Baty D *et al*, 123
Bentley GA — *See* Tello D *et al*, 507
Berger G — *See* Galmiche JM *et al*, 25
Beridze TG — *See* Kondrashov AS *et al*, 867
Bernadac A — *See* Pages JM *et al*, 169 — *See* Bolla JM *et al*, 385 — *See* Bourdineaud JP *et al*, 407
Bertin P, Lejeune P, Laurent-Winter C, Danchin A, Mutations in *bglY*, the structural gene for the DNA-binding protein H1, affect expression of several *Escherichia coli* genes, 889
Betton JM — *See* Yon JM *et al*, 417
Bhat TN — *See* Tello D *et al*, 507
Biellmann JF — *See* Lee KM *et al*, 285
Birnbaum D — *See* Galland F *et al*, 759
Bissery V — *See* Lemesle-Varloot L *et al*, 555
Blachier F — *** *See* Sener A *et al*, 685, — *** Malaisse WJ, Stimulation by D-glucose of the synthesis of polyphosphoinositides in pancreatic islets, 849
Blanquet S — *See* Meinnel T *et al*, 625
Bläsi U — *See* Witte A *et al*, 191
Blight M — *See* Holland IB *et al*, 131
Blouquit Y — *See* Calvin MC *et al*, 337
Blumer KJ — *See* Kokoska RJ *et al*, 803
Bodur H — *See* Liemans V *et al*, 251
Boigegrain RA — *See* Le Nguyen D *et al*, 431
Bolla JM — *** *See* Pages JM *et al*, 169, — *** Bernadac A, Lazdunski C, Pages JM, A genetic engineering approach to study the mode of assembly of the OmpF porin in the envelope of *Escherichia coli*, 385
Bomsel M — *See* Huang XH *et al*, 41
Borri-Voltattorni C — *See* Bruneau G *et al*, 73
Borštnik B — *See* Plohl M *et al*, 665
Bouaziz S — *See* Stoven V *et al*, 531
Boulet I — *See* Danielian S *et al*, 315
Boulot G — *See* Tello D *et al*, 507
Bourdineaud JP — *** *See* Baty D *et al*, 123, — *** Howard SP, Pages JM, Bernadac A, Leroy G, Bruschi M, Lazdunski C, Cytoplasmic and periplasmic expression of a synthetic gene for ferredoxin in *Escherichia coli*, 407
Brakhage AA, Wozny M, Putzer H, Structure and nucleotide sequence of the *Bacillus subtilis* phenylalanyl-tRNA synthetase genes, 725
Branlant G — *See* Corbier C *et al*, 545
Brewer JM, Wunderlich JK, Ragland WL, The amino acid sequence of avian thymic hormone, a parvalbumin, 653
Bruneau G, Krieger-Poullet M, Coge F, Borri-Voltattorni C, Gros F, Thibault J, Characterization of DOPA

decarboxylase mRNA in rat pheochromocytoma, 73
Brunel C — *See* Romby P *et al*, 437
Brunie S — *See* Meinnel T *et al*, 625
Bruschi M — *See* Bourdineaud JP *et al*, 407
Buckingham RH — *See* Sörensen PM *et al*, 873
Buneva VN — *See* Rabinkov AG *et al*, 719

C

Cabezas JA — *See* Marin MS *et al*, 745
Cacan R — *See* Lepers A *et al*, 1
Calvin MC, Blouquit Y, Garel MC, Prehu MO, Cohen-Solal M, Rosa J, Rosa R, Human biphosphoglycerate mutase expressed in *Escherichia coli:* purification, characterization and structure studies, 337
Carrascosa JM — *See* Medina MA *et al*, 291
Castro B — *See* Le Nguyen D *et al*, 431
Cavard D — *See* Baty D *et al*, 123
Chalet F — *See* Nasser W *et al*, 689
Charbit A — *See* Ronco J *et al*, 183
Cherfils J, Vachette P, Janin J, Modelling allosteric processes in *Escherichia coli* aspartate transcarbamylase, 617
Chiaureli NB — *See* Kondrashov AS *et al*, 867
Chiche L — *See* Le Nguyen D *et al*, 431
Chitarra V — *See* Tello D *et al*, 507
Choay J — *See* Mourey L *et al*, 599
Cock H (de), Hekstra D, Tommassen J, *In vitro* trimerization of outer membrane protein PhoE, 177
Coge F — *See* Bruneau G *et al*, 73
Cohen-Solal M — *See* Calvin MC *et al*, 337
Coletti-Previero MA — *See* Le Nguyen D *et al*, 431
Colote S — *See* Sri Widada J *et al*, 19
Corbier C, Mougin A, Mely Y, Adolph HW, Zeppezauer M, Gerard D, Wonacott A, Branlant G, The nicotinamide subsite of glyceraldehyde-3-phosphate dehydrogenase studied by site-directed mutagenesis, 545
Cruz MEM — *See* Martins MBF *et al*, 671
Cullin C — *See* Urban P *et al*, 463
Cunin R — *See* Hervé G *et al*, 609

D

Dahm SC, Uhlenbeck OC, Characterization of deoxy- and ribo-containing oligonucleotide substrates in the hammerhead self-cleavage reaction, 819
Danchin A — *See* Bertin P *et al*, 889
Danielian S, Fagard R, Boulet I, Fischer S, The retarded electrophoretic migration of $p56^{lck}$ induced by vanadate in lymphoma cells correlates with modified kinase activity, 315
Dardel F — *See* Meinnel T *et al*, 625
DasGupta BR — *** *See* Giménez JA, 213, — *** Dekleva ML, Botulinum neurotoxin type A: sequence of amino acids at the N-terminus and around the nicking site, 661
Dekleva ML — *See* DasGupta BR, 661
Delarue M — *See* Mourey L *et al*, 599
Delepelaire P — *See* Wandersman C *et al*, 143
Delsuc MA — *See* Stoven V *et al*, 531
Desmadril M — *See* Yon JM *et al*, 417
Despons L — *See* Walter P *et al*, 537
Dessen P — *See* Meinnel T *et al*, 625
Deutscher MP — *See* Ost KA, 813
Dondon J — *See* Romby P *et al*, 485
Ducruix A — *See* Arnoux B *et al*, 525
Duncan R — *See* Jeffrey IW *et al*, 751

E

Ebel JP — *See* Orfanoudakis G *et al*, 271 — *See* Giegé R *et al*, 453 — *See* Romby P *et al*, 485 — *See* Walter P *et al*, 537 — *See* Perret V *et al*, 735
Ehresmann B — *See* Romby P *et al*, 437 — *See* Romby P *et al*, 485
Ehresmann C — *See* Romby P *et al*, 437 — *See* Romby P *et al*, 485
Eiselé JL — *See* Tello D *et al*, 507
Ekondzi A — *See* Stoven V *et al*, 531
El'skaya AV — *See* Potapov AP *et al*, 345

F

Faelen M — ***, Gama MJ, Toussaint A, Characterization of an IS1 induced mutation in the carboxy-terminal end of bacteriophage Mu transposase which affects several functional domains of the protein, 697 — *** *See* Benbadis L *et al*, 855
Fagard R — *See* Danielian S *et al*, 315
Fasiolo F — *See* Walter P *et al*, 537
Favel A — *See* Le Nguyen D *et al*, 431
Fayat G — *See* Meinnel T *et al*, 625
Fazel A — *See* Benbadis L *et al*, 855
Fedorkin ON — *See* Morozov SY *et al*, 677
Fernandez A — *See* Marin MS *et al*, 745
Ferraz C — *See* Sri Widada J *et al*, 19
Filloux A — *See* Lazdunski A *et al*, 147
Fischer S — *See* Danielian S *et al*, 315
Fischmann T — *See* Tello D *et al*, 507
Florentz C — *See* Giegé R *et al*, 453 — *See* Perret V *et al*, 735
Flowers D — *See* Jamison J *et al*, 235
Fourel D — *See* Pages JM *et al*, 169
Frenette M — *See* Baty D *et al*, 123

G

Gaboriaud C — *See* Lemesle-Varloot L *et al*, 555
Gaillard-Miran S — *See* Yon JM *et al*, 417
Galland F, Stefanova M, Pirisi V, Birnbaum D, Characterization of a murine glyceraldehyde-3-phosphate dehydrogenase pseudogene, 759
Galmiche JM, Girault G, Berger G, Jacquot JP, Miginiac-Maslow M, Wollman E, Induction by different thioredoxins of ATPase activity in coupling factor 1 from spinach chloroplasts, 25
Gama MJ — *See* Faelen M *et al*, 697
Gamulin V — *See* Plohl M *et al*, 665
Garcia A — *See* Giegé R *et al*, 453 — *See* Perret V *et al*, 735
Garel JR — *See* Teschner W *et al*, 33 — *See* Calvin MC *et al*,

337 — *See* Teschner W *et al*, 403
Garnier J, Protein structure prediction, 513
Garrone R — *See* van der Rest M, 473
Gatineau E — *See* Ménez A *et al*, 575
Gerard D — *See* Corbier C *et al*, 545
Giegé R — ***, Florentz C, Garcia A, Grosjean H, Perret V, Puglisi J, Théobald-Dietrich A, Ebel JP, Exploring the aminoacylation function of transfer RNA by macromolecular engineering approaches. Involvement of conformational features in the charging process of yeast $tRNA^{Asp}$, 453 — ****See* Perret V *et al*, 735
Gilquin B — *See* Ménez A *et al*, 575
Gilson G — *See* Orfanoudakis G *et al*, 271
Giménez JA, DasGupta BR, Botulinum neurotoxin type E fragmented with endoproteinase Lys-C reveals the site trypsin nicks and homology with tetanus neurotoxin, 213
Girault G — *See* Galmiche JM *et al*, 25
Goshima N, Kano Y, Imamoto F, Characterization of HU-like protein from *Bifidobacterium longum*, 207
Graffe M — *See* Romby P *et al*, 485
Groisman IS — *See* Potapov AP *et al*, 345
Gros F — *See* Bruneau G *et al*, 73
Grosjean H — *See* Giegé R *et al*, 453 — *See* Perret V *et al*, 735
Grunberg-Manago M — *See* Romby P *et al*, 485 — *See* Régnier P *et al*, 825
Guarneros G, Portier C, Different specificities of ribonuclease II and polynucleotide phosphorylase in 3'mRNA decay, 771
Guittet A — *See* Stoven V *et al*, 531
Günther Sillero MA — *See* Meireles Ribeiro J *et al*, 227
Guzzo J — *See* Lazdunski A *et al*, 147

H

Haguenauer-Tsapis R — *See* Silve S *et al*, 103
Haiech J — *See* Sri Widada J *et al*, 19
Halfmann G — *See* Witte A *et al*, 191
Harvey AL — *See* Ménez A *et al*, 575
Heitz A — *See* Le Nguyen D *et al*, 431
Hekstra D — *See* Cock H (de) *et al*, 177
Henning U — *See* MacIntyre S, 157
Henrissat B — *See* Lemesle-Varloot L *et al*, 555
Hershey JWB — *See* Morley SJ, 25 — *See* Jeffrey IW *et al*, 751
Hervé G, Xi XG, Ladjimi M, Van Vliet F, Cunin R, Engineering aspartate transcarbamylase, 609
Hijazi KA — *See* Sörensen PM *et al*, 873
Hinnen A — *See* Silve S *et al*, 103
Hirano T, Iwakura Y, A novel transcriptional regulatory factor that binds to the polyoma virus enhancer in a developmental stage-specific manner, 327
Hofnung M — *See* Ronco J *et al*, 183 — *See* Martineau P *et al*, 397
Holland IB, Kenny B, Blight M, Haemolysin secretion from *Escherichia coli*, 131
Houdusse A — *See* Tello D *et al*, 507
Hountondji C — *See* Meinnel T *et al*, 625
Howard SP — *See* Bourdineaud JP *et al*, 407
Huang XH, Bomsel M, de Paillerets C, Weintraub H, Alfsen A, Biochemical characterization of algal coated vesicles, 41

I

Imamoto F — *See* Goshima N *et al*, 207 — *See* Natori Y *et al*, 265
Inoue M — *See* Kanda T *et al*, 355
Iwakura Y — *See* Hirano T, 327

J

Jacquot JP — *See* Galmiche JM *et al*, 25
Jamison J, Krabill K, Flowers D, Tsai CC, *In vitro* antiviral activity of poly (A-U) and ellipticines, 235
Janin J — *** *See* Cherfils J *et al*, 617, — *** Errors in three dimensions, 705
Janssen GMC — *See* Möller W, 361
Jeffrey IW, Kelly FJ, Duncan R, Hershey JWB, Pain VM, Effect of starvation and diabetes on the activity of the eukaryotic initiation factor eIF-2 in rat skeletal muscle, 751
Jorge JCS — *See* Martins MBF *et al*, 671

K

Kanda T, Inoue M, Akiyama M, Purification and characterization of an ubiquitin-immuno-reactive protein localized in the cap of young basidiocarp in the basidiomycete *Coprinus cinereus*, 355
Kano Y — *See* Goshima N *et al*, 207 — *See* Natori Y *et al*, 265
Karmali A, Novo C, Human alfa-fetoprotein: isolation and production of monoclonal antibodies, 369
Kelly FJ — *See* Jeffrey IW *et al*, 751
Kenny B — *See* Holland IB *et al*, 131
Knap AK, Wesolowski D, Altman S, Protection from chemical modification of nucleotides in complexes of M1 RNA, the catalytic subunit of RNase P from *Escherichia coli*, and tRNA precursors, 779
Knibiehler M — *See* Baty D *et al*, 123
Kokoska RJ, Blumer KJ, Steege DA, Phage f1 mRNA processing in *Escherichia coli:* search for the upstream products of endonuclease cleavage, requirement for the product of the altered mRNA stability *(ams)* locus, 803
Kondrashov AS, Beridze TG, Chiaureli NB, Two regions of M13 phage genome hybridizing with human DNA are similar to several keratin genes, 867
Kostetsky P, Vladimirova R, Identification of significant conservative and variable regions in homologous protein sequences, 295
Koumanov KS — *See* Momchilova-Pankova AB *et al*, 863
Krabill K — *See* Jamison J *et al*, 235
Krieger-Poullet M — *See* Bruneau G *et al*, 73
Kushner SR — *See* Yancey SD, 835

L

Labia R — *See* Lenfant F *et al*, 495

Ladjimi M — *See* Hervé G *et al*, 609
Laforet M — *See* Walter P *et al*, 537
Lallemand JY — *See* Stoven V *et al*, 531
Laplante S — *See* Stoven V *et al*, 531
Lascombe MB — *See* Tello D *et al*, 507
Latruffe N — *See* Bailly A *et al*, 351
Laurent-Winter C — *See* Bertin P *et al*, 889
Lazdunski A, Guzzo J, Filloux A, Bally M, Murgier M, Secretion of extracellular proteins by *Pseudomonas aeruginosa*, 147
Lazdunski C — *See* Baty D *et al*, 123 — *See* Bolla JM *et al*, 385 — *See* Bourdineaud JP *et al*, 407
Leal de Stevenson I — *See* Romby P *et al*, 437
Lee KM, Biellmann JF, β-Hydroxysteroid dehydrogenase: activity in microemulsion and extraction from *Pseudomonas testosteroni* cells with microemulsion, 285
Lefranc G — ***, Lefranc MP, Regulation of the immunoglobulin gene transcription, 7 — ***, Lefranc MP, Antibody engineering and perspectives in therapy, 639
Lefranc MP — *See* Lefranc G, 7 — *See* Lefranc G, 639
Le Goas R — *See* Stoven V *et al*, 531
Lejeune P — *See* Bertin P *et al*, 889
Lemesle-Varloot L, Henrissat B, Gaboriaud C, Bissery V, Morgat A, Mornon JP, Hydrophobic cluster analysis: procedures to derive structural and functional information from 2-D-representation of protein sequences, 555
Lenfant F, Labia R, Masson JM, Probing the active site of β-lactamase R-TEM$_1$ by informational suppression, 495
Le Nguyen D, Heitz A, Chiche L, Castro B, Boigegrain RA, Favel A, Coletti-Previero MA, Molecular recognition between serine proteases and new bioactive microproteins with a knotted structure, 431
Lepers A, Cacan R, Verbert A, Permeabilized cells as a way of gaining access to intracellular organelles: an approach to glycosylation reactions, 1
Leroy G — *See* Bourdineaud JP *et al*, 407
Lesage P — *See* Romby P *et al*, 485
Letoffe S — *See* Wandersman C *et al*, 143
Liautard JP — *See* Sri Widada J *et al*, 19
Liemans V, Bodur H, Malaisse-Lagae F, Malaisse WJ, Phosphoglucoisomerase-catalyzed interconversion of hexose phosphates: a model for the interconversion of D-[2-^{3}H]glucose 6-phosphate and D-[1-^{3}H]fructose 6-phosphate, 251
Llanillo M — *See* Marin MS *et al*, 745
Lone YC — *See* Bailly A *et al*, 351
Lormeau JC — *See* Mourey L *et al*, 599
Lubitz W — *See* Witte A *et al*, 191
Lukasheva LI — *See* Morozov SY *et al*, 677

M

MacIntyre S, Henning U, The role of the mature part of secretory proteins in translocation across the plasma membrane and in regulation of their synthesis in *Escherichia coli*, 157
Malaisse-Lagae F — *See* Liemans V *et al*, 251
Malaisse WJ — *See* Liemans V *et al*, 251 — *See* Sener A *et al*, 685 — *See* Zähner D, 715 — *See* Blachier F, 849
Malliavin T — *See* Stoven V *et al*, 531
Mansure Vânia JJ — *See* Panek AC *et al*, 77
Marin MS, Fernandez A, Sanchez-Yagüe J, Cabezas JA, Llanillo M, Changes in the phospholipid and fatty acid composition in normal erythrocytes from sheep of different ages. Aminophospholipid organization in the membrane bilayer, 745
Mariuzza RA — *See* Tello D *et al*, 507
Markovska TT — *See* Momchilova-Pankova AB *et al*, 863
Martineau P, Saurin W, Hofnung M, Spurlino JC, Quiocho FA, Progress in the identification of interaction sites on the periplasmic maltose binding protein from *Escherichia coli*, 397
Martins MBF, Jorge JCS, Cruz MEM, Acylation of L-asparaginase with total retention of enzymatic activity, 671
Marty L, Roux P, Royer M, Piechaczyk M, MoMuLV-Derived self-inactivating retroviral vectors possessing multiple cloning sites and expressing the resistance to either G418 or hygromycin B, 885
Masson JM — *See* Lenfant F *et al*, 495
Mechulam Y — *See* Meinnel T *et al*, 625
Medina MA, Carrascosa JM, Núñez de Castro I, Short-term effect of glutamine on the incorporation of glucose-carbon into nucleic acids in Ehrlich ascites tumour cells, 291
Meinnel T, Mechulam Y, Dardel F, Schmitter JM, Hountondji C, Brunie S, Dessen P, Fayat G, Blanquet S, Methionyl-tRNA synthetase from *Escherichia coli*. A review, 625
Meireles Ribeiro J, Ruiz A, Sillero A, Günther Sillero MA, A low K_M nucleoside 3'(2'),5'-bisphosphate 3'(2')-phosphohydrolase from rat liver, 227
Mely Y — *See* Corbier C *et al*, 545
Ménez A, Gatineau E, Roumestand C, Harvey AL, Mouawad L, Gilquin B, Toma F, Do cardiotoxins possess a functional site? Structural and chemical modification studies reveal the functional site of the cardiotoxin from *Naja nigricollis*, 575
Mercenier A — *See* Benbadis L *et al*, 855
Meunier JC — *See* Nury S, 219
Meyer D, Moris G, Wolff CM, Befort N, Remy P, Significance of dinucleoside tetraphosphate production by cultured tumor cells exposed to the presence of ethanol, 57
Miczak A — *See* Srivastava RK *et al*, 791
Miginiac-Maslow M — *See* Galmiche JM *et al*, 25
Mignotte B, Theveny B, Revet B, Structural modifications induced by the mtDBP-C protein in the replication origin of *Xenopus laevis* mitochondrial DNA, 65
Mikou A — *See* Stoven V *et al*, 531
Minard P — *See* Yon JM *et al*, 417
Miroshnichenko NA — *See* Morozov SY *et al*, 677
Missiakas D — *See* Yon JM *et al*, 417
Moine H — *See* Romby P *et al*, 485
Möller W, Janssen GMC, Transfer RNAs for primordial amino acids contain remnants of a primitive code at position 3 to 5, 361
Momchilova-Pankova AB, Markovska TT, Koumanov S, Acyl-CoA:1-acyl-glycero-3-phosphoethanolamine *O*-acyltransferase and liver plasma membrane fluidity, 863
Moras D — *See* Mourey L *et al*, 599
Morgat A — *See* Lemesle-Varloot L *et al*, 555
Moris G — *See* Meyer D *et al*, 57
Morley SJ, Hershey JWB, A fractionated reticulocyte lysate retains high efficiency for protein synthesis, 259
Mornon JP — *See* Lemesle-Varloot L *et al*, 555

Morozov SY, Miroshnichenko NA, Zelenina DA, Fedorkin ON, Solovijev AG, Lukasheva LI, Atabekov JC, Expression of RNA transcripts of potato virus X full-lenght and subgenomic cDNAs, 677
Mosteller RD, Improved method for measuring the catalytic activity of tryptophan synthase α subunit in cell extracts, 881
Mouawad L — *See* Yon JM *et al*, 417 — *See* Ménez A *et al*, 575
Mougin A — *See* Corbier C *et al*, 545
Moukadiri H — *See* Plouet J, 51
Mourey L, Samama JP, Delarue M, Choay J, Lormeau JC, Petitou M, Moras D, Antithrombin III: structural and functional aspects, 599
Mourtada A — *See* Sener A *et al*, 685
Murgier M — *See* Lazdunski A *et al*, 147
Murgola EJ — *See* Sörensen PM *et al*, 873

N

Nasser W, Chalet F, Robert-Baudouy J, Purification and characterization of extracellular pectate lyase from *Bacillus subtilis*, 689
Natori Y, Kano Y, Imamoto F, Genetic transformation of *Lactobacillus casei* by electroporation, 265
Neupert W — *See* Stuart RA, 115
Novo C — *See* Karmali A, 369
Núñez de Castro I — *See* Medina MA *et al*, 291
Nury S, Meunier JC, Effects of calcium on the stability and activity of guinea pig liver transglutaminase, 219

O

Olvera J — *See* Suzuki K *et al*, 299
Orfanoudakis G, Gilson G, Wolff CM, Ebel JP, Befort N, Remy P, Repair of acetyl-aminofluorene modified pBR322 DNA in *Xenopus laevis* oocytes and eggs; effect of diadenosine tetraphosphate, 271
Ost KA, Deutscher MP, RNase PH catalyzes a synthetic reaction, the addition of nucleotides to the 3' end of RNA, 813

P

Pages JM — ***, Bolla JM, Bernadac A, Fourel D, Immunological approach of assembly and topology of OmpF, an outer membrane protein of *Escherichia coli*, 169 — *** *See* Bolla JM *et al*, 385 — *** *See* Bourdineaud JP *et al*, 407
Paillerets C (de) — *See* Huang XH *et al*, 41
Pain VM — *See* Jeffrey IW *et al*, 751
Panek AC, Mansure Vânia JJ, Paschoalin MF, Panek D, Regulation of trehalose metabolism in *Saccharomyces cerevisiae* mutants during temperature shifts, 77
Panek D — *See* Panek AC *et al*, 77
Parker M — *See* Baty D *et al*, 123
Paschoalin MF — *See* Panek AC *et al*, 77
Pattus F — *See* Baty D *et al*, 123
Perahia D — *See* Yon JM *et al*, 417
Perret V — *** *See* Giegé R *et al*, 453, — ***, Garcia A, Puglisi J, Grosjean H, Ebel JP, Florentz C, Giegé R, Conformation in solution of yeast $tRNA^{Asp}$ transcripts deprived of modified nucleotides, 735
Petitou M — *See* Mourey L *et al*, 599
Picaud M — *See* Arnoux B *et al*, 525
Piechaczyk M — *See* Marty L *et al*, 885
Pirisi V — *See* Galland F *et al*, 759
Plohl M, Borštnik B, Ugarković D, Gamulin V, Sequence-induced curvature of *Tenebrio molitor* satellite DNA, 665
Plouet J, Moukadiri H, Specific binding of vasculotropin to bovine brain capillary endothelial cells, 51
Poljak RJ — *See* Tello D *et al*, 507
Pompon D — *See* Urban P *et al*, 463
Portier C — *See* Guarneros G, 771
Potapov AP, Groisman IS, El'skaya AV, Correlation between poly(U) misreading and poly(dT) translation efficiency in *Escherichia coli* cell-free systems, 345
Prehu MO — *See* Calvin MC *et al*, 337
Puglisi J — *See* Giegé R *et al*, 453 — *See* Perret V *et al*, 735
Pugsley AP, On remaining cytoplasmic, 89
Putzer H — *See* Brakhage AA *et al*, 725

Q

Quiocho FA — *See* Martineau P *et al*, 397

R

Rabinkov AG, Amontov SV, Buneva VN, Tarussova NB, Interaction of ATP with acetyl-CoA carboxylase from rat liver. The role of the polyphosphate chain. Affinity labelling with alkylating amides of ATP and ADP, 719
Ragland WL — *See* Brewer JM *et al*, 653
Régnier P, Grunberg-Manago M, RNase III cleavages in non-coding leaders of *Escherichia coli* transcripts control mRNA stability and genetic expression, 825
Reisdorf C — *See* Stoven V *et al*, 531
Reiss-Husson F — *See* Arnoux B *et al*, 525
Remy P — *See* Meyer D *et al*, 57 — *See* Orfanoudakis G *et al*, 271
Revet B — *See* Mignotte B *et al*, 65
Riottot MM — *See* Tello D *et al*, 507
Robert-Baudouy J — *See* Nasser W *et al*, 689
Robin M — *See* Stoven V *et al*, 531
Rock E, Sidi Mammar M, Thomas MA, Viret J, Vignon X, Halothane-induced functional and structural modifications in sarcoplasmic reticulum membranes from pig skeletal muscle, 245
Romaniuk PJ — *See* Romby P *et al*, 437
Romby P — ***, Baudin F, Brunel C, Leal de Stevenson I, Westhof E, Romaniuk PJ, Ehresmann C, Ehresmann B, Ribosomal 5S RNA from *Xenopus laevis* oocytes: conformation and interaction with transcription factor IIIA, 437 — ***, Moine H, Lesage P, Graffe M, Dondon J, Ebel JP, Grunberg-Manago M, Ehresmann B, Ehresmann C, Springer M, The relation between catalytic activity and gene

regulation in the case of *Escherichia coli* threonyl-tRNA synthetase, 485
Ronco J, Charbit A, Hofnung M, Creation of targets for proteolytic cleavage in the LamB protein of *Escherichia coli* K12 by genetic insertion of foreign sequences: implications for topological studies, 183
Rosa J — *See* Calvin MC *et al*, 337
Rosa R — *See* Calvin MC *et al*, 337
Roth M — *See* Arnoux B *et al*, 525
Roumestand C — *See* Ménez A *et al*, 575
Roux P — *See* Marty L *et al*, 885
Royer M — *See* Marty L *et al*, 885
Ruiz A — *See* Meireles Ribeiro J *et al*, 227

S

Sagstetter M — *See* Zimmermann R *et al*, 95
Samama JP — *See* Mourey L *et al*, 599
Sanchez-Yagüe J — *See* Marin MS *et al*, 745
Saul FA — *See* Tello D *et al*, 507
Saurin W — *See* Martineau P *et al*, 397
Schlenstedt G — *See* Zimmermann R *et al*, 95
Schmitter JM — *See* Meinnel T *et al*, 625
Sener A, Mourtada A, Blachier F, Malaisse WJ, Metabolic and secretory responses of parotid cells to cationic amino acids. Oxidation of the amino acids and interference with the oxidation of D-glucose or endogenous nutrients, 685
Serre MC — *See* Teschner W *et al*, 33 — *See* Teschner W *et al*, 403
Sharpe DJ, Wong LJC, Effects of substrates on the thermal stability of nuclear histone acetyltransferase, 323
Sidi Mammar M — *See* Rock E *et al*, 245
Sillero A — *See* Meireles Ribeiro J *et al*, 227
Silve S, Volland C, Hinnen A, Haguenauer-Tsapis R, *In vivo* translocation of the cell wall acid phosphatase across the yeast endoplasmic reticulum membrane: are there multiple signals for the targeting process? 103
Slos P — *See* Benbadis L *et al*, 855
Solioz M, Waser M, Efficient electrotransformation of *Enterococcus hirae* with a new *Enterococcus–Escherichia coli* shuttle vector, 279
Solovijev AG — *See* Morozov SY *et al*, 677
Sörensen PM, Hijazi KA, Murgola J, Buckingham RH, A radioactive assay for the physiological activity of the tryptophan synthetase α subunit in crude extracts of *Escherichia coli*, 873
Souchon H — *See* Tello D *et al*, 507
Spinelli S — *See* Tello D *et al*, 507
Springer M — *See* Romby P *et al*, 485
Spurlino JC — *See* Martineau P *et al*, 397
Srivastava RK, Miczak A, Apirion D, Maturation of precursor 10Sa RNA in *Escherichia coli* is a two-step process: the first reaction is catalyzed by RNase III in presence of Mn^{2+}, 791
Sri Widada J, Asselin J, Colote S, Ferraz C, Travé G, Afshar M, Haiech J, Liautard JP, Identification of the calmo-dulin binding domain of α-fodrin and implications for folding, 19
Steege DA — *See* Kokoska RJ *et al*, 803
Stefanova M — *See* Galland F *et al*, 759
Stoven V, Lallemand JY, Abergel D, Bouaziz S, Delsuc MA, Ekondzi A, Guittet A, Laplante S, Le Goas R, Malliavin T, Mikou A, Reisdorf C, Robin M, van Heijenoort C, Yang Y, Insight into protein nuclear magnetic resonance research, 531
Stuart RA, Neupert W, Apocytochrome *c*: an exceptional mitochondrial precursor protein using an exceptional import pathway, 115
Suzuki K, Olvera J, Wool IG, The primary structure of rat ribosomal protein S19, 299
Szostak M — *See* Witte A *et al*, 191

T

Tarussova NB — *See* Rabinkov AG *et al*, 719
Tello D, Spinelli S, Souchon H, Saul FA, Riottot MM, Mariuzza RA, Lascombe MB, Houdusse A, Eiselé JL, Fischmann T, Chitarra V, Boulot G, Bhat TN, Bentley GA, Alzari PM, Poljak RJ, Three-dimensional structure and antigen binding specificity of antibodies, 507
Teschner W — ***, Serre MC, Garel JR, Enzymatic properties, renaturation and metabolic role of mannitol-1-phosphate dehydrogenase from *Escherichia coli*, 33 — ***, Serre MC, Garel JR, Introduction by site-directed mutagenesis of a tryptophan residue as a fluorescent probe for the folding of *Escherichia coli* phosphofructokinase, 403
Théobald-Dietrich A — *See* Giegé R *et al*, 453
Theveny B — *See* Mignotte B *et al*, 65
Thibault J — *See* Bruneau G *et al*, 73
Thomas MA — *See* Rock E *et al*, 245
Toma F — *See* Ménez A *et al*, 575
Tommassen J — *See* Cock H (de) *et al*, 177
Toussaint A — *See* Faelen M *et al*, 697
Travé G — *See* Sri Widada J *et al*, 19
Tsai CC — *See* Jamison J *et al*, 235

U

Ugarković D — *See* Plohl M *et al*, 665
Uhlenbeck OC — *See* Dahm SC, 819
Urban P, Cullin C, Pompon D, Maximizing the expression of mammalian cytochrome P-450 monooxygenase activities in yeast cells, 463

V

Vachette P — *See* Cherfils J *et al*, 617
van der Rest M, Garrone R, Collagens as multidomain proteins, 473
van Heijenoort C — *See* Stoven V *et al*, 531
Van Vliet F — *See* Hervé G *et al*, 609

Verbert A — *See* Lepers A *et al*, 1
Vignon X — *See* Rock E *et al*, 245
Viret J — *See* Rock E *et al*, 245
Vladimirova R — *See* Kostetsky P, 295
Volland C — *See* Silve S *et al*, 103

W

Walter P, Despons L, Laforet M, Ebel JP, Fasiolo F, Yeast methionyl-tRNA synthetase: analysis of the N-terminal extension and the putative tRNA anticodon binding region by site-directed mutagenesis, 537
Wandersman C, Delepelaire P, Letoffe S, Secretion processing and activation of *Erwinia chrysanthemi* proteases, 143
Wanner G — *See* Witte A *et al*, 191
Ward M — *See* Bahri SM, 893
Waser M — *See* Solioz M, 279
Weintraub H — *See* Huang XH *et al*, 41
Wesolowski D — *See* Knap AK *et al*, 779
Westhof E — *See* Romby P *et al*, 437
Witte A, Bläsi U, Halfmann G, Szostak M, Wanner G, Lubitz W, PhiX174 protein E-mediated lysis of *Escherichia coli*, 191
Wolff CM — *See* Meyer D *et al*, 57 — *See* Orfanoudakis G *et al*, 271
Wollman E — *See* Galmiche JM *et al*, 25
Wonacott A — *See* Corbier C *et al*, 545
Wong LJC — *See* Sharpe DJ, 323
Wool IG — *See* Suzuki K *et al*, 299
Wozny M — *See* Brakhage AA *et al*, 725
Wunderlich JK — *See* Brewer JM *et al*, 653

X

Xi XG — *See* Hervé G *et al*, 609

Y

Yancey SD, Kushner SR, Isolation and characterization of a new temperature-sensitive polynucleotide phosphorylase mutation in *Escherichia coli* K-12, 835
Yang Y — *See* Stoven V *et al*, 531
Yon JM, Desmadril M, Betton JM, Minard P, Ballery N, Missiakas D, Gaillard-Miran S, Perahia D, Mouawad L, Flexibility and folding of phosphoglycerate kinase, 417

Z

Zähner D, Malaisse WJ, Kinetic behaviour of liver glucokinase in insulinopenic situations: effect of fructose 1-phosphate in fed and starved rats, 715
Zak Z — *See* Zaman K, 711
Zaman K, Zak Z, Purification and properties of chicken egg-white cobalamin-binding protein
Zelenina DA — *See* Morozov SY *et al*, 677
Zeppezauer M — *See* Corbier C *et al*, 545
Zimmermann R, Sagstetter M, Schlenstedt G, Ribonucleoparticle-independent import of proteins into mammalian microsomes involves a membrane protein which is sensitive to chemical alkylation, 95

KEYWORD INDEX

A

Acetyl-CoA carboxylase — Interaction of ATP with acetyl-CoA carboxylase from rat liver. The role of the polyphosphate chain. Affinity labelling with alkylating amides of ATP and ADP, 719

Acid phosphatase — *In vivo* translocation of the cell wall acid phosphatase across the yeast endoplasmic reticulum membrane: are there multiple signals for the targeting process? 103

Active site — Probing the active site of β-lactamase R-TEM_1 by informational suppression, 495

Active site structure — Interaction of ATP with acetyl-CoA carboxylase from rat liver. The role of the polyphosphate chain. Affinity labelling with alkylating amides of ATP and ADP, 719

Acylation — Acylation of L-asparaginase with total retention of enzymatic activity, 671

Acyltransferase — Acyl-CoA:1-acyl-glycero-3-phosphoethanolamine *O*-acyltransferase and liver plasma membrane fluidity, 863

Adenosine 2',5'-bisphosphate — A low K_M nucleoside 3'(2'),5'-bisphosphate 3'(2')-phosphohydrolase from rat liver, 227

Adenosine 3',5'-bisphosphate — A low K_M nucleoside 3'(2'),5'-bisphosphate 3'(2')-phosphohydrolase from rat liver, 227

Adenosine 3'-phosphate 5'-phosphosulphate — A low K_M nucleoside 3'(2'),5'-bisphosphate 3'(2')-phosphohydrolase from rat liver, 227

Adenosine 5'-phosphosulphate — A low K_M nucleoside 3'(2'),5'-bisphosphate 3'(2')-phosphohydrolase from rat liver, 227

Affinity labeling — Methionyl-tRNA synthetase from *Escherichia coli*. A review, 625 — Interaction of ATP with acetyl-CoA carboxylase from rat liver. The role of the polyphosphate chain. Affinity labelling with alkylating amides of ATP and ADP, 719

Aging — Changes in the phospholipid and fatty acid composition in normal erythrocytes from sheep of different ages. Aminophospholipid organization in the membrane bilayer, 745

Alfa-fetoprotein — Human alfa-fetoprotein: isolation and production of monoclonal antibodies, 369

Algae — Biochemical characterization of algal coated vesicles, 41

Alignment — Hydrophobic cluster analysis: procedures to derive structural and functional information from 2-D-representation of protein sequences, 555

Alkylating ATP and ADP amides — Interaction of ATP with acetyl-CoA carboxylase from rat liver. The role of the polyphosphate chain. Affinity labelling with alkylating amides of ATP and ADP, 719

Allostery — Engineering aspartate transcarbamylase, 609

Altered message stability — Phage f1 mRNA processing in *Escherichia coli:* search for the upstream products of endonuclease cleavage, requirement for the product of the altered mRNA stability *(ams)* locus, 803

Amber suppressors — Probing the active site of β-lactamase R-TEM_1 by informational suppression, 495

pAMB1-1 — Genetic transformation of *Lactobacillus casei* by electroporation, 265

Amino acid sequence — Botulinum neurotoxin type A: sequence of amino acids at the N-terminus and around the nicking site, 661

Amino acid sequence comparisons — The primary structure of rat ribosomal protein S19, 299

Aminoacyl-tRNA synthetases — Significance of dinucleoside tetraphosphate production by cultured tumor cells exposed to the presence of ethanol, 57 — Exploring the aminoacylation function of transfer RNA by macromolecular engineering approaches. Involvement of conformational features in the charging process of yeast $tRNA^{Asp}$, 453 — Yeast methionyl-tRNA synthetase: analysis of the N-terminal extension and the putative tRNA anticodon binding region by site-directed mutagenesis, 537 — Structure and nucleotide sequence of the *Bacillus subtilis* phenylalanyl-tRNA synthetase genes, 725

Aminophospholipid topology — Changes in the phospholipid and fatty acid composition in normal erythrocytes from sheep of different ages. Aminophospholipid organization in the membrane bilayer, 745

cAMP-protein phosphorylation — Regulation of trehalose metabolism in *Saccharomyces cerevisiae* mutants during temperature shifts, 77

Amylase release — Metabolic and secretory responses of parotid cells to cationic amino acids. Oxidation of the amino acids and interference with the oxidation of D-glucose or endogenous nutrients, 685

α-Amylase *(Streptomyces thermoviolaceus)* induction by maltotriose — Regulation of a thermostable α-amylase of *Streptomyces thermoviolaceus* CUB74: maltotriose is the smallest inducer, 893

Angiogenic growth factors — Specific binding of vasculotropin to bovine brain capillary endothelial cells, 51

Antibiotic — Correlation between poly(U) misreading and poly(dT) translation efficiency in *Escherichia coli* cell-free systems, 345
Anticodon binding site — Yeast methionyl-tRNA synthetase: analysis of the N-terminal extension and the putative tRNA anticodon binding region by site-directed mutagenesis, 537
Antigen-antibody — Three-dimensional structure and antigen binding specificity of antibodies, 507
Antigenic site — Immunological approach of assembly and topology of OmpF, an outer membrane protein of *Escherichia coli*, 169
Antithrombin III — Antithrombin III: structural and functional aspects, 599
Antiviral — *In vitro* antiviral activity of poly (A-U) and ellipticines, 235
Ap4A — Repair of acetyl-aminofluorene modified pBR322 DNA in *Xenopus laevis* oocytes and eggs; effect of diadenosine tetraphosphate, 271
Apocytochrome *c* — Apocytochrome *c*: an exceptional mitochondrial precursor protein using an exceptional import pathway, 115
Arrhenius energy — Effects of substrates on the thermal stability of nuclear histone acetyltransferase, 323
Aspartate transcarbamylase — Engineering aspartate transcarbamylase, 609 — Modelling allosteric processes in *Escherichia coli* aspartate trans-carbamylase, 617
ATH sequence — The amino acid sequence of avian thymic hormone, a parvalbumin, 653
ATP-phosphonate analogs — Interaction of ATP with acetyl-CoA carboxylase from rat liver. The role of the polyphosphate chain. Affinity labelling with alkylating amides of ATP and ADP, 719
ATPase activation spinach — Induction by different thioredoxins of ATPase activity in coupling factor 1 from spinach chloroplasts, 25
Avian thymic hormone — The amino acid sequence of avian thymic hormone, a parvalbumin, 653

B

Bacillus stearothermophilus — Recognition of $tRNA^{Tyr}$ by tyrosyl-tRNA synthetase, 589
Bacillus subtilis — Purification and characterization of extracellular pectate lyase from *Bacillus subtilis*, 689 — Structure and nucleotide sequence of the *Bacillus subtilis* phenylalanyl-tRNA synthetase genes, 725
Bacteriophage Mu — Characterization of an IS1 induced mutation in the carboxy-terminal end of bacteriophage Mu transposase which affects several functional domains of the protein, 697
Bacteriophages — Characterization and comparison of virulent bacteriophages of *Streptococcus thermophilus* isolated from yogurt, 855
Bifidobacterium longum — Characterization of HU-like protein from *Bifidobacterium longum*, 207
Binding isotherm — Effects of calcium on the stability and activity of guinea pig liver transglutaminase, 219
Biotechnology — Maximizing the expression of mammalian cytochrome P-450 monooxygenase activities in yeast cells, 463
Bisphosphoglycerate mutase — Human biphosphoglycerate mutase expressed in *Escherichia coli:* purification, characterization and structure studies, 337
Blue-Sepharose chromatography — Human biphosphoglycerate mutase expressed in *Escherichia coli:* purification, characterization and structure studies, 337
Botulinum neurotoxin type A — Botulinum neurotoxin type A: sequence of amino acids at the N-terminus and around the nicking site, 661
Botulinum tetanus neurotoxins — Botulinum neurotoxin type E fragmented with endoproteinase Lys-C reveals the site trypsin nicks and homology with tetanus neurotoxin, 213

C

Calcium — Effects of calcium on the stability and activity of guinea pig liver transglutaminase, 219
Calmodulin — Identification of the calmodulin binding domain of α-fodrin and implications for folding, 19
Carboxypeptidase — Molecular recognition between serine proteases and new bioactive microproteins with a knotted structure, 431
Cardiotoxin — Do cardiotoxins possess a functional site? Structural and chemical modification studies reveal the functional site of the cardiotoxin from *Naja nigricollis*, 575
Catalytic assay — Improved method for measuring the catalytic activity of tryptophan synthase α subunit in cell extracts, 881
Catalytic RNA — Characterization of deoxy- and ribo-containing oligonucleotide substrates in the hammerhead self-cleavage reaction, 819
Cationic amino acids — Metabolic and secretory responses of parotid cells to cationic amino acids. Oxidation of the amino acids and interference with the oxidation of D-glucose or endogenous nutrients, 685
Cell differentiation — A novel transcriptional regulatory factor that binds to the polyoma virus enhancer in a developmental stage-specific manner, 327
Cell growth — Significance of dinucleoside tetraphosphate production by cultured tumor cells exposed to the presence of ethanol, 57
Chaperonins — The role of the mature part of secretory proteins in translocation across the plasma membrane and in regulation of their synthesis in *Escherichia coli*, 157
Characterization — Purification and characterization of extracellular pectate lyase from *Bacillus subtilis*, 689
Chemical modification — Acylation of L-asparaginase with total retention of enzymatic activity, 671 — Protection from chemical modification of nucleotides in complexes of M1 RNA, the catalytic subunit of RNase P from *Escherichia coli*, and tRNA precursors, 779
Chemical RNA probes — Conformation in solution of yeast $tRNA^{Asp}$ transcripts deprived of modified nucleotides, 735
Chemotaxis — Progress in the identification of interaction sites on the periplasmic maltose binding protein from *Escherichia coli*, 397
Chimeric antibody — Antibody engineering and perspectives in therapy, 639
Chloroplasts — Induction by different thioredoxins of ATPase activity in coupling factor 1 from spinach chloroplasts, 25

Chromosome structure — Mutations in *bglY*, the structural gene for the DNA-binding protein H1, affect expression of several *Escherichia coli* genes, 889
Clathrin — Biochemical characterization of algal coated vesicles, 41
Coated vesicles — Biochemical characterization of algal coated vesicles, 41
Cobalamin-binding protein — Purification and properties of chicken egg-white cobalamin-binding protein, 711
Codon-anticodon — Transfer RNAs for primordial amino acids contain remnants of a primitive code at position 3 to 5, 361
Colicin receptor — A genetic engineering approach to study the mode of assembly of the OmpF porin in the envelope of *Escherichia coli*, 385
Collagen — Collagens as multidomain proteins, 473
Conformation — Ribosomal 5S RNA from *Xenopus laevis* oocytes: conformation and interaction with transcription factor IIIA, 437
Constitutive heterochromatin — Sequence-induced curvature of *Tenebrio molitor* satellite DNA, 665
Cooperativity — Effects of calcium on the stability and activity of guinea pig liver transglutaminase, 219
Coprinus cinereus — Purification and characterization of an ubiquitin-immuno-reactive protein localized in the cap of young basidiocarp in the basidiomycete *Coprinus cinereus*, 355
Coupling factor 1 — Induction by different thioredoxins of ATPase activity in coupling factor 1 from spinach chloroplasts, 25
Crosslinking — Characterization of HU-like protein from *Bifidobacterium longum*, 207
Crystal — Towards the understanding of the function of *Rhodobacter sphaeroides* Y wild type reaction center: gene cloning, protein and detergent structures in the three-dimensional crystals, 525
Cucurbitacaea — Molecular recognition between serine proteases and new bioactive microproteins with a knotted structure, 431
Cytochrome b_5 — Maximizing the expression of mammalian cytochrome P-450 monooxygenase activities in yeast cells, 463
Cytochrome P-450 — Maximizing the expression of mammalian cytochrome P-450 monooxygenase activities in yeast cells, 463
Cytotoxicity — Do cardiotoxins possess a functional site? Structural and chemical modification studies reveal the functional site of the cardiotoxin from *Naja nigricollis*, 575

D

D-fructose 1-phosphate — Kinetic behaviour of liver glucokinase in insulinopenic situations: effect of fructose 1-phosphate in fed and starved rats, 715
D-β-hydroxybutyrate dehydrogenase — Variations of specific mRNA and polypeptide contents of rat liver D-β-hydroxybutyrate dehydrogenase during an experimental diabetes mellitus, 351
3-D structure — Methionyl-tRNA synthetase from *Escherichia coli*. A review, 625
D-[1-^{3}H]fructose-6-phosphate — Phosphoglucoisomerase-catalyzed interconversion of hexose phosphates: a model for the interconversion of D-[2-^{3}H]glucose 6-phosphate and D-[1-^{3}H]fructose 6-phosphate, 251
D-[2-^{3}H]glucose-6-phosphate — Phosphoglucoisomerase-catalyzed interconversion of hexose phosphates: a model for the interconversion of D-[2-^{3}H]glucose 6-phosphate and D-[1-^{3}H]fructose 6-phosphate, 251
Detergent — Towards the understanding of the function of *Rhodobacter sphaeroides* Y wild type reaction center: gene cloning, protein and detergent structures in the three-dimensional crystals, 525
Development — Purification and characterization of an ubiquitin-immuno-reactive protein localized in the cap of young basidiocarp in the basidiomycete *Coprinus cinereus*, 355
Diabetes — Variations of specific mRNA and polypeptide contents of rat liver D-β-hydroxybutyrate dehydrogenase during an experimental diabetes mellitus, 351
Diadenosine tetraphosphate — Repair of acetyl-aminofluorene modified pBR322 DNA in *Xenopus laevis* oocytes and eggs; effect of diadenosine tetraphosphate, 271
2-Dimensional electrophoresis — Mutations in *bglY*, the structural gene for the DNA-binding protein H1, affect expression of several *Escherichia coli* genes, 889
Dinucleoside tetraphosphate — Significance of dinucleoside tetraphosphate production by cultured tumor cells exposed to the presence of ethanol, 57
Directed mutagenesis — The nicotinamide subsite of glyceraldehyde-3-phosphate dehydrogenase studied by site-directed mutagenesis, 545
DNA bending — Structural modifications induced by the mtDBP-C protein in the replication origin of *Xenopus laevis* mitochondrial DNA, 65 — Sequence-induced curvature of *Tenebrio molitor* satellite DNA, 665
DNA-binding protein — Structural modifications induced by the mtDBP-C protein in the replication origin of *Xenopus laevis* mitochondrial DNA, 65 — Characterization of HU-like protein from *Bifidobacterium longum*, 207
DNA curvature — Structural modifications induced by the mtDBP-C protein in the replication origin of *Xenopus laevis* mitochondrial DNA, 65
DNA repair — Repair of acetyl-aminofluorene modified pBR322 DNA in *Xenopus laevis* oocytes and eggs; effect of diadenosine tetraphosphate, 271
DOPA decarboxylase — Characterization of DOPA decarboxylase mRNA in rat pheochromocytoma, 73

E

Egg-white — Purification and properties of chicken egg-white cobalamin-binding protein, 711
Ehrlich tumour cells — Short-term effect of glutamine on the incorporation of glucose-carbon into nucleic acids in Ehrlich ascites tumour cells, 291
Elastase — Molecular recognition between serine proteases and new bioactive microproteins with a knotted structure, 431
Electron microscopy — Structural modifications induced by the mtDBP-C protein in the replication origin of *Xenopus laevis* mitochondrial DNA, 65
Electroporation — Genetic transformation of *Lactobacillus*

casei by electroporation, 265 — Efficient electrotransformation of *Enterococcus hirae* with a new *Enterococcus–Escherichia coli* shuttle vector, 279
Ellipticines — *In vitro* antiviral activity of poly (A-U) and ellipticines, 235
Endogenous lysis — PhiX174 protein E-mediated lysis of *Escherichia coli*, 191
Endonuclease cleavage — Phage f1 mRNA processing in *Escherichia coli:* search for the upstream products of endonuclease cleavage, requirement for the product of the altered mRNA stability *(ams)* locus, 803
Endoplasmic reticulum — Ribonucleoparticle-independent import of proteins into mammalian microsomes involves a membrane protein which is sensitive to chemical alkylation, 95 — *In vivo* translocation of the cell wall acid phosphatase across the yeast endoplasmic reticulum membrane: are there multiple signals for the targeting process? 103
Enhancers — Regulation of the immunoglobulin gene transcription, 7
Enterococcus — Efficient electrotransformation of *Enterococcus hirae* with a new *Enterococcus–Escherichia coli* shuttle vector, 279
Enzymatic activity — Enzymatic properties, renaturation and metabolic role of mannitol-1-phosphate dehydrogenase from *Escherichia coli*, 33
Enzymology — Engineering aspartate transcarbamylase, 609
Erwinia chrysanthemi — Secretion processing and activation of *Erwinia chrysanthemi* proteases, 143
Erythrocyte — Changes in the phospholipid and fatty acid composition in normal erythrocytes from sheep of different ages. Aminophospholipid organization in the membrane bilayer, 745
Escherichia coli — Induction by different thioredoxins of ATPase activity in coupling factor 1 from spinach chloroplasts, 25 — Immunological approach of assembly and topology of OmpF, an outer membrane protein of *Escherichia coli*, 169 — Creation of targets for proteolytic cleavage in the LamB protein of *Escherichia coli* K12 by genetic insertion of foreign sequences: implications for topological studies, 183 — The relation between catalytic activity and gene regulation in the case of *Escherichia coli* threonyl-tRNA synthetase, 485 — Recognition of $tRNA^{Tyr}$ by tyrosyl-tRNA synthetase, 589 — Methionyl-tRNA synthetase from *Escherichia coli.* A review, 625
***Escherichia coli*-expressed enzyme** — Human biphosphoglycerate mutase expressed in *Escherichia coli:* purification, characterization and structure studies, 337
Ethanolic extraction — Significance of dinucleoside tetraphosphate production by cultured tumor cells exposed to the presence of ethanol, 57
Ethanolic stress — Significance of dinucleoside tetraphosphate production by cultured tumor cells exposed to the presence of ethanol, 57
Eukaryotic expression vector — MoMuLV-Derived self-inactivating retroviral vectors possessing multiple cloning sites and expressing the resistance to either G418 or hygromycin B, 885
Evolution — Transfer RNAs for primordial amino acids contain remnants of a primitive code at position 3 to 5, 361
Evolution of routing signals — On remaining cytoplasmic, 89
3' to 5' Exoribonucleases — Different specificities of ribonuclease II and polynucleotide phosphorylase in 3'mRNA decay, 771
Export — A genetic engineering approach to study the mode of assembly of the OmpF porin in the envelope of *Escherichia coli*, 385
Export incompatibility — The role of the mature part of secretory proteins in translocation across the plasma membrane and in regulation of their synthesis in *Escherichia coli*, 157

F

F9 EC cells — A novel transcriptional regulatory factor that binds to the polyoma virus enhancer in a developmental stage-specific manner, 327
Fab-Fv — Three-dimensional structure and antigen binding specificity of antibodies, 507
Fatty acid composition — Changes in the phospholipid and fatty acid composition in normal erythrocytes from sheep of different ages. Aminophospholipid organization in the membrane bilayer, 745
Fluidity — Acyl-CoA:1-acyl-glycero-3-phosphoethanolamine *O*-acyltransferase and liver plasma membrane fluidity, 863
α-Fetoprotein — Human alfa-fetoprotein: isolation and production of monoclonal antibodies, 369
α-Fodrin — Identification of the calmodulin binding domain of α-fodrin and implications for folding, 19 — *In vitro* trimerization of outer membrane protein PhoE, 177 — Flexibility and folding of phosphoglycerate kinase, 417
Functional site — Do cardiotoxins possess a functional site? Structural and chemical modification studies reveal the functional site of the cardiotoxin from *Naja nigricollis*, 575

G

Gapdh — Characterization of a murine glyceraldehyde-3-phosphate dehydrogenase pseudogene, 759
Gel mobility shift assay — A novel transcriptional regulatory factor that binds to the polyoma virus enhancer in a developmental stage-specific manner, 327
Genetic code — Transfer RNAs for primordial amino acids contain remnants of a primitive code at position 3 to 5, 361
Genetic engineering — Antibody engineering and perspectives in therapy, 639
Genetic transformation — Genetic transformation of *Lactobacillus casei* by electroporation, 265
Glucokinase — Kinetic behaviour of liver glucokinase in insulinopenic situations: effect of fructose 1-phosphate in fed and starved rats, 715
Glucose — Short-term effect of glutamine on the incorporation of glucose-carbon into nucleic acids in Ehrlich ascites tumour cells, 291
Glutamine — Short-term effect of glutamine on the incorporation of glucose-carbon into nucleic acids in Ehrlich ascites tumour cells, 291
Glutaminyl-tRNA synthetase — Recognition of $tRNA^{Tyr}$ by tyrosyl-tRNA synthetase, 589
Glyceraldehyde-3-phosphate dehydrogenase — The nicotinamide subsite of glyceraldehyde-3-phosphate dehy-

drogenase studied by site-directed mutagenesis, 545
Glycosylation — Permeabilized cells as a way of gaining access to intracellular organelles: an approach to glycosylation reactions, 1

H

Haemolysin — Haemolysin secretion from *Escherichia coli*, 131
Halothane — Halothane-induced functional and structural modifications in sarcoplasmic reticulum membranes from pig skeletal muscle, 245
Hammerhead — Characterization of deoxy- and ribo-containing oligonucleotide substrates in the hammerhead self-cleavage reaction, 819
HBI — Characterization of HU-like protein from *Bifidobacterium longum*, 207
Heat inactivation — Effects of substrates on the thermal stability of nuclear histone acetyltransferase, 323
Heat shock — Regulation of trehalose metabolism in *Saccharomyces cerevisiae* mutants during temperature shifts, 77
Heparin — Antithrombin III: structural and functional aspects, 599
Heterologous expression — Maximizing the expression of mammalian cytochrome P-450 monooxygenase activities in yeast cells, 463
Homologous recombination — Antibody engineering and perspectives in therapy, 639
Homology — Protein structure prediction, 513
Homology detection — Hydrophobic cluster analysis: procedures to derive structural and functional information from 2-D-representation of protein sequences, 555
HPLC chromatography — Human biphosphoglycerate mutase expressed in *Escherichia coli:* purification, characterization and structure studies, 337
HU-like protein — Characterization of HU-like protein from *Bifidobacterium longum*, 207
Human cord serum — Human alfa-fetoprotein: isolation and production of monoclonal antibodies, 369
Human lymphocytes — Induction by different thioredoxins of ATPase activity in coupling factor 1 from spinach chloroplasts, 25
Hybridoma technology — Human alfa-fetoprotein: isolation and production of monoclonal antibodies, 369
Hydrophobic interaction chromatography — Human alfa-fetoprotein: isolation and production of monoclonal antibodies, 369
Hydrophobicity — Acylation of L-asparaginase with total retention of enzymatic activity, 671
Hydroxysteroid dehydrogenase — β-Hydroxysteroid dehydrogenase: activity in microemulsion and extraction from *Pseudomonas testosteroni* cells with microemulsion, 285

I

Idiotope-antiidiotope complex — Three-dimensional structure and antigen binding specificity of antibodies, 507
Immunoadhesin — Antibody engineering and perspectives in therapy, 639
Immunoglobulin — Regulation of the immunoglobulin gene transcription, 7 — Antibody engineering and perspectives in therapy, 639
Immunolocalization — A genetic engineering approach to study the mode of assembly of the OmpF porin in the envelope of *Escherichia coli*, 385
Immunotoxin — Antibody engineering and perspectives in therapy, 639
Import pathway — Apocytochrome *c*: an exceptional mitochondrial precursor protein using an exceptional import pathway, 115
Improved electroporation unit — Efficient electrotransformation of *Enterococcus hirae* with a new *Enterococcus–Escherichia coli* shuttle vector, 279
Interferon induction — *In vitro* antiviral activity of poly (A-U) and ellipticines, 235
***In vitro* protein synthesis** — A fractionated reticulocyte lysate retains high efficiency for protein synthesis, 259
***In vitro* translation** — Characterization of DOPA decarboxylase mRNA in rat pheochromocytoma, 73 — Expression of RNA transcripts of potato virus X full-lenght and subgenomic cDNAs, 677
Inhibition — Molecular recognition between serine proteases and new bioactive microproteins with a knotted structure, 431
Initiation — Effect of starvation and diabetes on the activity of the eukaryotic initiation factor eIF-2 in rat skeletal muscle, 751
Insulin — Effect of starvation and diabetes on the activity of the eukaryotic initiation factor eIF-2 in rat skeletal muscle, 751
Insulin action — Variations of specific mRNA and polypeptide contents of rat liver D-β-hydroxybutyrate dehydro-genase during an experimental diabetes mellitus, 351
Interaction — Identification of the calmodulin binding domain of α-fodrin and implications for folding, 19 — Ribosomal 5S RNA from *Xenopus laevis* oocytes: conformation and interaction with transcription factor IIIA, 437
Iron-sulfur clusters — Cytoplasmic and periplasmic expression of a synthetic gene for ferredoxin in *Escherichia coli*, 407
IS1 — Characterization of an IS1 induced mutation in the carboxy terminal end of bacteriophage Mu transposase which affects several functional domains of the protein, 697

K

Keratin — Two regions of M13 phage genome hybridizing with human DNA are similar to several keratin genes, 867
Knottins — Molecular recognition between serine proteases and new bioactive microproteins with a knotted structure, 431

L

L-asparaginase — Acylation of L-asparaginase with total

retention of enzymatic activity, 671
β-Lactamase — Probing the active site of β-lactamase R-TEM_1 by informational suppression, 495
Lactobacillus casei — Genetic transformation of *Lactobacillus casei* by electroporation, 265
LamB — Creation of targets for proteolytic cleavage in the LamB protein of *Escherichia coli* K12 by genetic insertion of foreign sequences: implications for topological studies, 183
Lipids — Biochemical characterization of algal coated vesicles, 41
Liver — A low K_M nucleoside 3'(2'),5'-bisphosphate 3'(2')-phosphohydrolase from rat liver, 227
Liver plasma membranes — Acyl-CoA:1-acyl-glycero-3-phosphoethanolamine *O*-acyltransferase and liver plasma membrane fluidity, 863
Lymphocyte — The retarded electrophoretic migration of $p56^{lck}$ induced by vanadate in lymphoma cells correlates with modified kinase activity, 315
Lysis tunnel — PhiX174 protein E-mediated lysis of *Escherichia coli*, 191
Lysozyme — Three-dimensional structure and antigen binding specificity of antibodies, 507

M

M1 RNA — Protection from chemical modification of nucleotides in complexes of M1 RNA, the catalytic subunit of RNase P from *Escherichia coli*, and tRNA precursors, 779
M13 probe — Two regions of M13 phage genome hybridizing with human DNA are similar to several keratin genes, 867
Malignant hyperthermia — Halothane-induced functional and structural modifications in sarcoplasmic reticulum membranes from pig skeletal muscle, 245
Maltose binding protein — Progress in the identification of interaction sites on the periplasmic maltose binding protein from *Escherichia coli*, 397
Maltose transport — Progress in the identification of interaction sites on the periplasmic maltose binding protein from *Escherichia coli*, 397
Mannitol-1-phosphate dehydrogenase — Enzymatic properties, renaturation and metabolic role of mannitol-1-phosphate dehydrogenase from *Escherichia coli*, 33
Maximum entropy method — Insight into protein nuclear magnetic resonance research, 531
Membrane protein topology — Creation of targets for proteolytic cleavage in the LamB protein of *Escherichia coli* K12 by genetic insertion of foreign sequences: implications for topological studies, 183
Membrane proteins — Expression of RNA transcripts of potato virus X full-lenght and subgenomic cDNAs, 677
Membrane targetting — PhiX174 protein E-mediated lysis of *Escherichia coli*, 191
Metabolic studies — Permeabilized cells as a way of gaining access to intracellular organelles: an approach to glycosylation reactions, 1
Methionyl — Methionyl-tRNA synthetase from *Escherichia coli*. A review, 625
Methylation interference — A novel transcriptional regulatory factor that binds to the polyoma virus enhancer in a developmental stage-specific manner, 327
Methylmercuric gel — Characterization of DOPA decarboxylase mRNA in rat pheochromocytoma, 73
Micelles — β-Hydroxysteroid dehydrogenase: activity in microemulsion and extraction from *Pseudomonas testosteroni* cells with microemulsion, 285
Microemulsion — β-Hydroxysteroid dehydrogenase: activity in microemulsion and extraction from *Pseudomonas testosteroni* cells with microemulsion, 285
Microinjection — Repair of acetyl-aminofluorene modified pBR322 DNA in *Xenopus laevis* oocytes and eggs; effect of diadenosine tetraphosphate, 271
Minisatellite — Two regions of M13 phage genome hybridizing with human DNA are similar to several keratin genes, 867
Misreading — Correlation between poly(U) misreading and poly(dT) translation efficiency in *Escherichia coli* cell-free systems, 345
Misrouting — On remaining cytoplasmic, 89
Mitochondrial DNA — Structural modifications induced by the mtDBP-C protein in the replication origin of *Xenopus laevis* mitochondrial DNA, 65
Mitochondrial precursor protein — Apocytochrome *c*: an exceptional mitochondrial precursor protein using an exceptional import pathway, 115
Modelling — Protein structure prediction, 513
Modified nucleotides — Conformation in solution of yeast $tRNA^{Asp}$ transcripts deprived of modified nucleotides, 735
Molecular graphics — Modelling allosteric processes in *Escherichia coli* aspartate transcarbamylase, 617
Molecular recognition — Molecular recognition between serine proteases and new bioactive microproteins with a knotted structure, 431
Monoclonal antibodies — Human alfa-fetoprotein: isolation and production of monoclonal antibodies, 369 — Three-dimensional structure and antigen binding specificity of antibodies, 507
Mouse testis — Characterization of a murine glyceraldehyde-3-phosphate dehydrogenase pseudogene, 759
Multidimensional NMR — Insight into protein nuclear magnetic resonance research, 531
Mutagenesis — Identification of the calmodulin binding domain of α-fodrin and implications for folding, 19

N

N-acetyl-aminofluorene — Repair of acetyl-aminofluorene modified pBR322 DNA in *Xenopus laevis* oocytes and eggs; effect of diadenosine tetraphosphate, 271
N-ethylmaleimide — Ribonucleoparticle-independent import of proteins into mammalian microsomes involves a membrane protein which is sensitive to chemical alkylation, 95
N-iodoacetylaminoethyl-5-naphthylamine-1-sulphonic acid — Ribonucleoparticle-independent import of proteins into mammalian microsomes involves a membrane protein which is sensitive to chemical alkylation, 95
N-terminal amino acid — Human biphosphoglycerate mutase expressed in *Escherichia coli:* purification, characterization and structure studies, 337
N-terminus — Botulinum neurotoxin type A: sequence of

amino acids at the N-terminus and around the nicking site, 661
NADPH-cytochrome P-450 reductase — Maximizing the expression of mammalian cytochrome P-450 monooxygenase activities in yeast cells, 463
Negative co-operativity — The nicotinamide subsite of glyceraldehyde-3-phosphate dehydrogenase studied by site-directed mutagenesis, 545
Neutron — Towards the understanding of the function of *Rhodobacter sphaeroides* Y wild type reaction center: gene cloning, protein and detergent structures in the three-dimensional crystals, 525
Neutron scattering — Methionyl-tRNA synthetase from *Escherichia coli*. A review, 625
Nicking site — Botulinum neurotoxin type A: sequence of amino acids at the N-terminus and around the nicking site, 661
Nicotinamide subsite — The nicotinamide subsite of glyceraldehyde-3-phosphate dehydrogenase studied by site-directed mutagenesis, 545
NMR — Do cardiotoxins possess a functional site? Structural and chemical modification studies reveal the functional site of the cardiotoxin from *Naja nigricollis*, 575
Nuclear histone acetyltransferase — Effects of substrates on the thermal stability of nuclear histone acetyltransferase, 323
Nuclear magnetic resonance — Insight into protein nuclear magnetic resonance research, 531
Nucleic acids — Short-term effect of glutamine on the incorporation of glucose-carbon into nucleic acids in Ehrlich ascites tumour cells, 291
Nucleoside diphosphate — RNase PH catalyzes a synthetic reaction, the addition of nucleotides to the 3' end of RNA, 813
Nucleotide sequences — The primary structure of rat ribosomal protein S19, 299
Number of genes — The primary structure of rat ribosomal protein S19, 299

O

Oligonucleotide-directed mutagenesis — Probing the active site of β-lactamase R-TEM$_1$ by informational suppression, 495
OmpF protein — Immunological approach of assembly and topology of OmpF, an outer membrane protein of *Escherichia coli*, 169
One-step purification — Human alfa-fetoprotein: isolation and production of monoclonal antibodies, 369
Outer membrane — Immunological approach of assembly and topology of OmpF, an outer membrane protein of *Escherichia coli*, 169 — A genetic engineering approach to study the mode of assembly of the OmpF porin in the envelope of *Escherichia coli*, 385

P

P-glycoprotein — Haemolysin secretion from *Escherichia coli*, 131
p56^{lck} — The retarded electrophoretic migration of p56^{lck} induced by vanadate in lymphoma cells correlates with modified kinase activity, 315
Pancreatic islet cells — Stimulation by D-glucose of the synthesis of polyphosphoinositides in pancreatic islets, 849
Parotid cells — Metabolic and secretory responses of parotid cells to cationic amino acids. Oxidation of the amino acids and interference with the oxidation of D-glucose or endogenous nutrients, 685
Parvalbumin — The amino acid sequence of avian thymic hormone, a parvalbumin, 653
Pectate lyase — Purification and characterization of extracellular pectate lyase from *Bacillus subtilis*, 689
Permeabilized cells — Permeabilized cells as a way of gaining access to intracellular organelles: an approach to glycosylation reactions, 1
Phenyl Sepharose CL-4B — Human alfa-fetoprotein: isolation and production of monoclonal antibodies, 369
Phenylalanyl-tRNA synthetase — Structure and nucleotide sequence of the *Bacillus subtilis* phenylalanyl-tRNA synthetase genes, 725
PhoE protein — *In vitro* trimerization of outer membrane protein PhoE, 177
Phosphofructokinase — Introduction by site-directed mutagenesis of a tryptophan residue as a fluorescent probe for the folding of *Escherichia coli* phosphofructokinase, 403
Phosphoglucoisomerase — Phosphoglucoisomerase-catalyzed interconversion of hexose phosphates: a model for the interconversion of D-[2-^{3}H]glucose 6-phosphate and D-[1-^{3}H]fructose 6-phosphate, 251
Phosphoglycerate kinase — Flexibility and folding of phosphoglycerate kinase, 417
Phospholipases A2 — Identification of significant conservative and variable regions in homologous protein sequences, 295
Phospholipid composition — Changes in the phospholipid and fatty acid composition in normal erythrocytes from sheep of different ages. Aminophospholipid organization in the membrane bilayer, 745
Phospholipids — Acyl-CoA:1-acyl-glycero-3-phosphoethanolamine *O*-acyltransferase and liver plasma membrane fluidity, 863
Phosphorolysis — Isolation and characterization of a new temperature-sensitive polynucleotide phosphorylase mutation in *Escherichia coli* K-12, 835
Phosphorylation — The retarded electrophoretic migration of p56^{lck} induced by vanadate in lymphoma cells correlates with modified kinase activity, 315
Phylogenetic tree — Identification of significant conservative and variable regions in homologous protein sequences, 295
Pig muscle — Halothane-induced functional and structural modifications in sarcoplasmic reticulum membranes from pig skeletal muscle, 245
Plasmids — Maturation of precursor 10Sa RNA in *Escherichia coli* is a two-step process: the first reaction is catalyzed by RNase III in presence of Mn^{2+}, 791
PNPase — Isolation and characterization of a new temperature-sensitive polynucleotide phosphorylase mutation in *Escherichia coli* K-12, 835
Poly A$^+$ mRNA — Characterization of DOPA decarboxylase mRNA in rat pheochromocytoma, 73
Poly(dT) — Correlation between poly(U) misreading and

poly(dT) translation efficiency in *Escherichia coli* cell-free systems, 345
Poly(U) — Correlation between poly(U) misreading and poly(dT) translation efficiency in *Escherichia coli* cell-free systems, 345
Polymerase chain reaction — Maximizing the expression of mammalian cytochrome P-450 monooxygenase activities in yeast cells, 463
Polynucleotide phosphorylase — Different specificities of ribonuclease II and polynucleotide phosphorylase in 3'mRNA decay, 771
Polyoma virus enhancer — A novel transcriptional regulatory factor that binds to the polyoma virus enhancer in a developmental stage-specific manner, 327
Polyphosphoinositides — Stimulation by D-glucose of the synthesis of polyphosphoinositides in pancreatic islets, 849
Polyribonucleotide — *In vitro* antiviral activity of poly (A-U) and ellipticines, 235
Positive transcriptional factor — A novel transcriptional regulatory factor that binds to the polyoma virus enhancer in a developmental stage-specific manner, 327
Prediction — Protein structure prediction, 513
Preprocecropin A — Ribonucleoparticle-independent import of proteins into mammalian microsomes involves a membrane protein which is sensitive to chemical alkylation, 95
Primordial amino acids — Transfer RNAs for primordial amino acids contain remnants of a primitive code at position 3 to 5, 361
Promoters — Regulation of the immunoglobulin gene transcription, 7
Proteases — Secretion processing and activation of *Erwinia chrysanthemi* proteases, 143 — Creation of targets for proteolytic cleavage in the LamB protein of *Escherichia coli* K12 by genetic insertion of foreign sequences: implications for topological studies, 183
Protein A-Sepharose CL-4B — Human alfa-fetoprotein: isolation and production of monoclonal antibodies, 369
Protein assembly — Immunological approach of assembly and topology of OmpF, an outer membrane protein of *Escherichia coli*, 169
Protein biosynthesis — Correlation between poly(U) misreading and poly(dT) translation efficiency in *Escherichia coli* cell-free systems, 345
Protein conformation — Collagens as multidomain proteins, 473
Protein crystallography — Errors in three dimensions, 705
Protein engineering — Collagens as multidomain proteins, 473
Protein export — The role of the mature part of secretory proteins in translocation across the plasma membrane and in regulation of their synthesis in *Escherichia coli*, 157 — Immunological approach of assembly and topology of OmpF, an outer membrane protein of *Escherichia coli*, 169 — Cytoplasmic and periplasmic expression of a synthetic gene for ferredoxin in *Escherichia coli*, 407
Protein folding — Introduction by site-directed mutagenesis of a tryptophan residue as a fluorescent probe for the folding of *Escherichia coli* phosphofructokinase, 403
Protein import — Ribonucleoparticle-independent import of proteins into mammalian microsomes involves a membrane protein which is sensitive to chemical alkylation, 95
Protein modelling — Modelling allosteric processes in *Escherichia coli* aspartate transcarbamylase, 617
Protein NMR structure — Errors in three dimensions, 705
Protein phosphorylation — Effect of starvation and diabetes on the activity of the eukaryotic initiation factor eIF-2 in rat skeletal muscle, 751
Protein-protein interactions — Progress in the identification of interaction sites on the periplasmic maltose binding protein from *Escherichia coli*, 397
Protein purification — Purification and properties of chicken egg-white cobalamin-binding protein, 711
Protein sequences — Hydrophobic cluster analysis: procedures to derive structural and functional information from 2-D-representation of protein sequences, 555
Protein structure — Enzymatic properties, renaturation and metabolic role of mannitol-1-phosphate dehydrogenase from *Escherichia coli*, 33 — Insight into protein nuclear magnetic resonance research, 531 — Hydrophobic cluster analysis: procedures to derive structural and functional information from 2-D-representation of protein sequences, 555
Protein synthesis — Effect of starvation and diabetes on the activity of the eukaryotic initiation factor eIF-2 in rat skeletal muscle, 751
Protein translocation — On remaining cytoplasmic, 89 — Uptake across the cell envelope and insertion into the inner membrane of ion channel-forming colicins in *Escherichia coli*, 123
Protein — Secretion of extracellular proteins by *Pseudomonas aeruginosa*, 147 — Protein structure prediction, 513 — Insight into protein nuclear magnetic resonance research, 531
Protein-domains — Uptake across the cell envelope and insertion into the inner membrane of ion channel-forming colicins in *Escherichia coli*, 123
Pseudogene — Characterization of a murine glyceraldehyde-3-phosphate dehydrogenase pseudogene, 759
Pseudomonas aeruginosa — Secretion of extracellular proteins by *Pseudomonas aeruginosa*, 147
Pseudomonas testosteroni — β-Hydroxysteroid dehydrogenase: activity in microemulsion and extraction from *Pseudomonas testosteroni* cells with microemulsion, 285

R

Rabbit reticulocyte lysate — A fractionated reticulocyte lysate retains high efficiency for protein synthesis, 259
Radioactive assay — A radioactive assay for the physiological activity of the tryptophan synthetase α subunit in crude extracts of *Escherichia coli*, 873
Radioceptor assay — Specific binding of vasculotropin to bovine brain capillary endothelial cells, 51
Reaction center — Towards the understanding of the function of *Rhodobacter sphaeroides* Y wild type reaction center: gene cloning, protein and detergent structures in the three-dimensional crystals, 525
Recombinant DNA — The primary structure of rat ribosomal protein S19, 299 — Expression of RNA transcripts of potato virus X full-lenght and subgenomic cDNAs, 677
Recombinant retroviruses — MoMuLV-Derived self-inactivating retroviral vectors possessing multiple

cloning sites and expressing the resistance to either G418 or hygromycin B, 885
Regulation — Regulation of the immunoglobulin gene transcription, 7 — Regulation of a thermostable α-amylase of *Streptomyces thermoviolaceus* CUB74: maltotriose is the smallest inducer, 893
Repression by mannitol — Regulation of a thermostable α-amylase of *Streptomyces thermoviolaceus* CUB74: maltotriose is the smallest inducer, 893
Retarded electrophoretic mobility — Sequence-induced curvature of *Tenebrio molitor* satellite DNA, 665
Ribonuclease — Characterization of deoxy- and ribo-containing oligonucleotide substrates in the hammerhead self-cleavage reaction, 819
Ribonuclease II — Different specificities of ribonuclease II and polynucleotide phosphorylase in 3'mRNA decay, 771
Ribozyme — Characterization of deoxy- and ribo-containing oligonucleotide substrates in the hammerhead self-cleavage reaction, 819
RNA conformation — Conformation in solution of yeast $tRNA^{Asp}$ transcripts deprived of modified nucleotides, 735
RNA processing — Maturation of precursor 10Sa RNA in *Escherichia coli* is a two-step process: the first reaction is catalyzed by RNase III in presence of Mn^{2+}, 791
RNA protein recognition — Exploring the aminoacylation function of transfer RNA by macromolecular engineering approaches. Involvement of conformati-onal features in the charging process of yeast $tRNA^{Asp}$, 453
RNA secondary structures — RNase III cleavages in non-coding leaders of *Escherichia coli* transcripts control mRNA stability and genetic expression, 825
RNA synthesis — RNase PH catalyzes a synthetic reaction, the addition of nucleotides to the 3' end of RNA, 813
mRNA conformation — The relation between catalytic activity and gene regulation in the case of *Escherichia coli* threonyl-tRNA synthetase, 485
mRNA decay — RNase III cleavages in non-coding leaders of *Escherichia coli* transcripts control mRNA stability and genetic expression, 825 — Isolation and characterization of a new temperature-sensitive polynucleotide phosphorylase mutation in *Escherichia coli* K-12, 835
mRNA degradation — Different specificities of ribonuclease II and polynucleotide phosphorylase in 3'mRNA decay, 771
mRNA destabilization — RNase III cleavages in non-coding leaders of *Escherichia coli* transcripts control mRNA stability and genetic expression, 825
mRNA expression — Variations of specific mRNA and polypeptide contents of rat liver D-β-hydroxybutyrate dehydrogenase during an experimental diabetes mellitus, 351
mRNA processing — Phage f1 mRNA processing in *Escherichia coli:* search for the upstream products of endonuclease cleavage, requirement for the product of the altered mRNA stability *(ams)* locus, 803 — RNase III cleavages in non-coding leaders of *Escherichia coli* transcripts control mRNA stability and genetic expression, 825
mRNA size — The primary structure of rat ribosomal protein S19, 299
mRNA stability — Different specificities of ribonuclease II and polynucleotide phosphorylase in 3'mRNA decay, 771
10Sa RNA maturation — Maturation of precursor 10Sa RNA in *Escherichia coli* is a two-step process: the first reaction is catalyzed by RNase III in presence of Mn^{2+}, 791
5S rRNA — Ribosomal 5S RNA from *Xenopus laevis* oocytes conformation and interaction with transcription factor IIIA, 437
tRNA — Yeast methionyl-tRNA synthetase: analysis of the N-terminal extension and the putative tRNA anticodon binding region by site-directed mutagenesis, 537
tRNA discrimination — Methionyl-tRNA synthetase from *Escherichia coli.* A review, 625
tRNA precursors — Protection from chemical modification of nucleotides in complexes of M1 RNA, the catalytic subunit of RNase P from *Escherichia coli*, and tRNA precursors, 779
tRNA synthetase — Methionyl-tRNA synthetase from *Escherichia coli.* A review, 625
$tRNA^{Asp}$ — Exploring the aminoacylation function of transfer RNA by macromolecular engineering approaches. Involvement of conformational features in the charging process of yeast $tRNA^{Asp}$, 453
$tRNA^{Asp}$ transcripts — Conformation in solution of yeast $tRNA^{Asp}$ transcripts deprived of modified nucleotides, 735
$tRNA^{Tyr}$ identity — Recognition of $tRNA^{Tyr}$ by tyrosyl-tRNA synthetase, 589
RNase III — Maturation of precursor 10Sa RNA in *Escherichia coli* is a two-step process: the first reaction is catalyzed by RNase III in presence of Mn^{2+}, 791 — RNase III cleavages in non-coding leaders of *Escherichia coli* transcripts control mRNA stability and genetic expression, 825
RNase PH — RNase PH catalyzes a synthetic reaction, the addition of nucleotides to the 3' end of RNA, 813

S

Saccharomyces cerevisiae — Regulation of trehalose metabolism in *Saccharomyces cerevisiae* mutants during temperature shifts, 77
Sarcoplasmic reticulum — Halothane-induced functional and structural modifications in sarcoplasmic reticulum membranes from pig skeletal muscle, 245
Secondary structure — Protein structure prediction, 513 — Hydrophobic cluster analysis: procedures to derive structural and functional information from 2D-representation of protein sequences, 555
Secretion — On remaining cytoplasmic, 89 — Haemolysin secretion from *Escherichia coli*, 131 — Secretion processing and activation of *Erwinia chrysanthemi* proteases, 143 — Secretion of extracellular proteins by *Pseudomonas aeruginosa*, 147
Secretion signal — Haemolysin secretion from *Escherichia coli*, 131
Sequence — Botulinum neurotoxin type E fragmented with endoproteinase Lys-C reveals the site trypsin nicks and homology with tetanus neurotoxin, 213
Sequence comparisons — Hydrophobic cluster analysis: procedures to derive structural and functional information from 2-D-representation of protein sequences, 555
Serpin superfamily — Antithrombin III: structural and functional aspects, 599

Shuttle-vector — Efficient electrotransformation of *Enterococcus hirae* with a new *Enterococcus–Escherichia coli* shuttle vector, 279
Signal peptide — *In vivo* translocation of the cell wall acid phosphatase across the yeast endoplasmic reticulum membrane: are there multiple signals for the targeting process? 103
Similarity — Two regions of M13 phage genome hybridizing with human DNA are similar to several keratin genes, 867
Site-directed mutagenesis — A novel transcriptional regulatory factor that binds to the polyoma virus enhancer in a developmental stage-specific manner, 327 — Introduction by site-directed mutagenesis of a tryptophan residue as a fluorescent probe for the folding of *Escherichia coli* phosphofructokinase, 403 — Flexibility and folding of phosphoglycerate kinase, 417 — Yeast methionyl-tRNA synthetase: analysis of the N-terminal extension and the putative tRNA anticodon binding region by site-directed mutagenesis, 537
Skeletal muscle — Effect of starvation and diabetes on the activity of the eukaryotic initiation factor eIF-2 in rat skeletal muscle, 751
Small stable RNA — Maturation of precursor 10Sa RNA in *Escherichia coli* is a two-step process: the first reaction is catalyzed by RNase III in presence of Mn^{2+}, 791
Snake — Do cardiotoxins possess a functional site? Structural and chemical modification studies reveal the functional site of the cardiotoxin from *Naja nigricollis*, 575
Solubilization — β-Hydroxysteroid dehydrogenase: activity in microemulsion and extraction from *Pseudomonas testosteroni* cells with microemulsion, 285
Sorting control — The role of the mature part of secretory proteins in translocation across the plasma membrane and in regulation of their synthesis in *Escherichia coli*, 157
Spectroscopy — Halothane-induced functional and structural modifications in sarcoplasmic reticulum membranes from pig skeletal muscle, 245
Stability — β-Hydroxysteroid dehydrogenase: activity in microemulsion and extraction from *Pseudomonas testosteroni* cells with microemulsion, 285
Starvation — Kinetic behaviour of liver glucokinase in insulinopenic situations: effect of fructose 1-phosphate in fed and starved rats, 715 — Effect of starvation and diabetes on the activity of the eukaryotic initiation factor eIF-2 in rat skeletal muscle, 751
Streptococcus thermophilus — Characterization and comparison of virulent bacteriophages of *Streptococcus thermophilus* isolated from yogurt, 855
Structural domains — Flexibility and folding of phosphoglycerate kinase, 417
Structural model — Recognition of $tRNA^{Tyr}$ by tyrosyl-tRNA synthetase, 589
Structure — Do cardiotoxins possess a functional site? Structural and chemical modification studies reveal the functional site of the cardiotoxin from *Naja nigricollis*, 575
Structure-function — Probing the active site of β-lactamase R-TEM_1 by informational suppression, 495
Substrate binding — Protection from chemical modification of nucleotides in complexes of M1 RNA, the catalytic subunit of RNase P from *Escherichia coli*, and tRNA precursors, 779
Substrate effects — Effects of substrates on the thermal stability of nuclear histone acetyltransferase, 323
Substrate specificity — Interaction of ATP with acetyl-CoA carboxylase from rat liver. The role of the polyphosphate chain. Affinity labelling with alkylating amides of ATP and ADP, 719
α Subunit — Improved method for measuring the catalytic activity of tryptophan synthase α subunit in cell extracts, 881
Sugar metabolism — Enzymatic properties, renaturation and metabolic role of mannitol-1-phosphate dehydrogenase from *Escherichia coli*, 33
Sugar nucleotides — Permeabilized cells as a way of gaining access to intracellular organelles: an approach to glycosylation reactions, 1
Sulphate — A low K_M nucleoside 3'(2'),5'-bisphosphate 3'(2')-phosphohydrolase from rat liver, 227
Superhelical structure — Sequence-induced curvature of *Tenebrio molitor* satellite DNA, 665
Synthetic gene — Cytoplasmic and periplasmic expression of a synthetic gene for ferredoxin in *Escherichia coli*, 407

T

T7 transcripts — Exploring the aminoacylation function of transfer RNA by macromolecular engineering approaches. Involvement of conformational features in the charging process of yeast $tRNA^{Asp}$, 453
Tertiary structure — Protein structure prediction, 513
TFIIIA — Ribosomal 5S RNA from *Xenopus laevis* oocytes: conformation and interaction with transcription factor IIIA, 437
Thermal RNA melting — Conformation in solution of yeast $tRNA^{Asp}$ transcripts deprived of modified nucleotides, 735
Thermostability — Effects of calcium on the stability and activity of guinea pig liver transglutaminase, 219
Thermotolerance — Regulation of trehalose metabolism in *Saccharomyces cerevisiae* mutants during temperature shifts, 77
Thioredoxins — Induction by different thioredoxins of ATPase activity in coupling factor 1 from spinach chloroplasts, 25
Threonyl-tRNA synthetase — The relation between catalytic activity and gene regulation in the case of *Escherichia coli* threonyl-tRNA synthetase, 485
Thymus — The amino acid sequence of avian thymic hormone, a parvalbumin, 653
Transcription — Regulation of the immunoglobulin gene transcription, 7
Transfer RNA — Transfer RNAs for primordial amino acids contain remnants of a primitive code at position 3 to 5, 361
Transformation — Efficient electrotransformation of *Enterococcus hirae* with a new *Enterococcus–Escherichia coli* shuttle vector, 279
Transglutaminase — Effects of calcium on the stability and activity of guinea pig liver transglutaminase, 219
Translational control studies — A fractionated reticulocyte lysate retains high efficiency for protein synthesis, 259
Translational regulation — The relation between catalytic activity and gene regulation in the case of *Escherichia coli* threonyl-tRNA synthetase, 485
Translocation — *In vivo* translocation of the cell wall acid phosphatase across the yeast endoplasmic reticulum

membrane: are there multiple signals for the targeting process? 103
Transposase — Characterization of an IS1 induced mutation in the carboxy-terminal end of bacteriophage Mu transposase which affects several functional domains of the protein, 697
Trehalose enzymes — Regulation of trehalose metabolism in *Saccharomyces cerevisiae* mutants during temperature shifts, 77
Trimerization — *In vitro* trimerization of outer membrane protein PhoE, 177
Tripe helix — Collagens as multidomain proteins, 473
***trp* genes** — Genetic transformation of *Lactobacillus casei* by electroporation, 265
Trypsin — Molecular recognition between serine proteases and new bioactive microproteins with a knotted structure, 431
Trypsin-nicking site — Botulinum neurotoxin type E fragmented with endoproteinase Lys-C reveals the site trypsin nicks and homology with tetanus neurotoxin, 213
Tryptophan fluorescence — Introduction by site-directed mutagenesis of a tryptophan residue as a fluorescent probe for the folding of *Escherichia coli* phosphofructokinase, 403
Tryptophan synthase — A radioactive assay for the physiological activity of the tryptophan synthetase α subunit in crude extracts of *Escherichia coli*, 873 — Improved method for measuring the catalytic activity of tryptophan synthase α subunit in cell extracts, 881
Tyrosine protein kinase — The retarded electrophoretic migration of $p56^{lck}$ induced by vanadate in lymphoma cells correlates with modified kinase activity, 315

U

Ubiquitin — Purification and characterization of an ubiquitin-immuno-reactive protein localized in the cap of young basidiocarp in the basidiomycete *Coprinus cinereus*, 355

V

Vanadate — The retarded electrophoretic migration of $p56^{lck}$ induced by vanadate in lymphoma cells correlates with modified kinase activity, 315
Variability profile — Identification of significant conservative and variable regions in homologous protein sequences, 295
Vasculotropin — Specific binding of vasculotropin to bovine brain capillary endothelial cells, 51
Viral DNA — Expression of RNA transcripts of potato virus X full-lenght and subgenomic cDNAs, 677
Voltage-gated channels — Uptake across the cell envelope and insertion into the inner membrane of ion channel-forming colicins in *Escherichia coli*, 123

X —Y

X-ray — Towards the understanding of the function of *Rhodobacter sphaeroides* Y wild type reaction center: gene cloning, protein and detergent structures in the three-dimensional crystals, 525
X-ray structure — Antithrombin III: structural and functional aspects, 599
Xenobiotics degradation — Maximizing the expression of mammalian cytochrome P-450 monooxygenase activities in yeast cells, 463
Xenopus laevis — Repair of acetyl-aminofluorene modified pBR322 DNA in *Xenopus laevis* oocytes and eggs; effect of diadenosine tetraphosphate, 271 — Ribosomal 5S RNA from *Xenopus laevis* oocytes: conformation and interaction with transcription factor IIIA, 437

Yeast — *In vivo* translocation of the cell wall acid phosphatase across the yeast endoplasmic reticulum membrane: are there multiple signals for the targeting process? 103
Yeast vectors — Maximizing the expression of mammalian cytochrome P-450 monooxygenase activities in yeast cells, 463